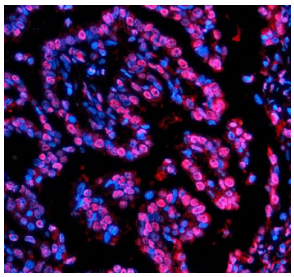
NUPR1 Antibody / Nuclear Protein 1 Polyclonal Antibody (FY12888)

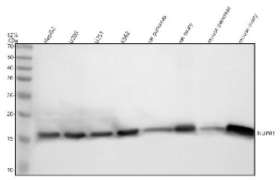
Catalog No.	Formulation	Size
FY12888	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

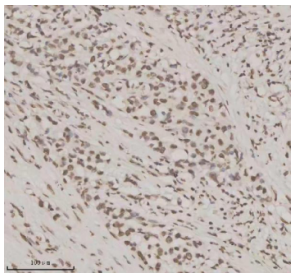
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	O60356
Localization	Nuclear, cytoplasmic
Applications	Western Blot: 0.25-0.5ug/ml Immunohistochemistry: 2-5ug/ml Immunofluorescence: 5ug/ml Immunocytochemistry/Immunofluorescence: 5ug/ml Flow cytometry: 1-3ug/million cells
Limitations	This NUPR1 Antibody / Nuclear Protein 1 Polyclonal Antibody is available for research use only.



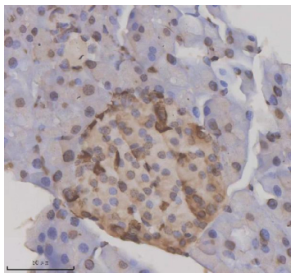
NUPR1 Antibody IF Staining in Human Lung Cancer Tissue. Immunofluorescence staining of FFPE human lung cancer tissue using Nuclear Protein 1 Polyclonal Antibody. NUPR1 is detected in red using a Cy3-conjugated secondary antibody, with DAPI nuclear counterstaining in blue. Red fluorescence is observed in both nuclear and perinuclear regions. Heat-mediated antigen retrieval was performed using EDTA buffer (pH 8.0), and the primary antibody was used at 5 ug/ml.



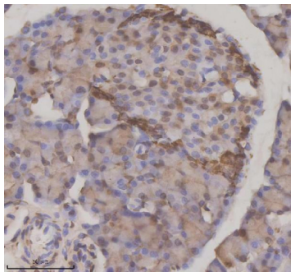
NUPR1 Antibody Western Blot in Human Cell Lines and Rodent Tissues. Western blot analysis using Nuclear Protein 1 Polyclonal Antibody at 0.5 ug/ml. Lanes 1-4: human HepG2, U2OS, U251, and K562 cell lysates. Lanes 5-6: rat pancreas and ovary lysates. Lanes 7-8: mouse pancreas and ovary lysates. A predominant band is detected at approximately 16-17 kDa, above the calculated molecular weight of approximately 9 kDa. Published biochemical studies have demonstrated that NUPR1 exhibits anomalously slow SDS-PAGE migration due to its intrinsically disordered structure and highly basic character, accounting for an apparent molecular weight substantially greater than its actual mass.



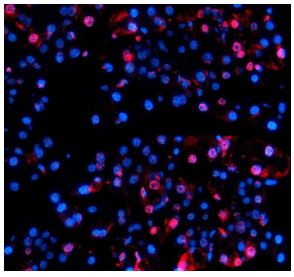
NUPR1 Antibody IHC Staining in Human Lung Cancer Tissue. Immunohistochemical analysis of FFPE human lung cancer tissue using Nuclear Protein 1 Polyclonal Antibody at 2 ug/ml. Brown DAB staining is observed in tumor cell nuclei and portions of the cytoplasm, with hematoxylin counterstaining. Heat-mediated antigen retrieval was performed using EDTA buffer (pH 8.0).



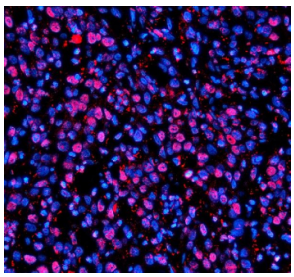
NUPR1 Antibody IHC Staining in Mouse Pancreatic Tissue. Immunohistochemical analysis of FFPE mouse pancreas using Nuclear Protein 1 Polyclonal Antibody at 2 ug/ml. Brown DAB staining is visible in pancreatic islet cells, including nuclear and cytoplasmic regions. Surrounding exocrine pancreatic tissue exhibits comparatively limited staining. Heat-mediated antigen retrieval was performed using EDTA buffer (pH 8.0).



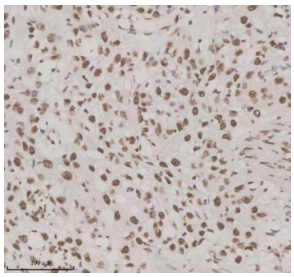
NUPR1 Antibody IHC Staining in Rat Pancreatic Tissue. Immunohistochemical analysis of FFPE rat pancreas using Nuclear Protein 1 Polyclonal Antibody at 2 ug/ml. Brown DAB staining is observed in pancreatic islet cells and portions of the surrounding exocrine tissue. Nuclear and cytoplasmic staining patterns are visible. Heat-mediated antigen retrieval was performed using EDTA buffer (pH 8.0).



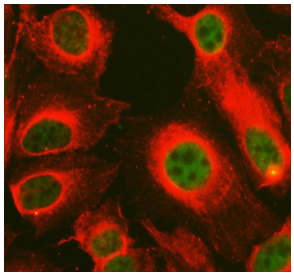
NUPR1 Antibody IF Staining in Mouse Pancreatic Tissue. Immunofluorescence staining of FFPE mouse pancreas using Nuclear Protein 1 Polyclonal Antibody at 5 ug/ml. NUPR1-associated fluorescence is shown in red using a Cy3-conjugated secondary antibody, with DAPI nuclear counterstaining in blue. Red fluorescence is distributed among pancreatic cells, including nuclear and perinuclear regions. Antigen retrieval was performed using EDTA buffer (pH 8.0).



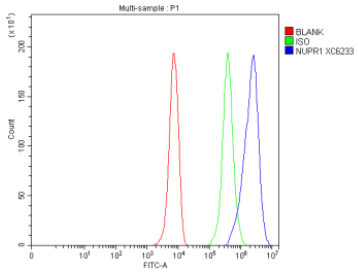
NUPR1 Antibody IF Staining in Human Bladder Cancer Tissue. Immunofluorescence staining of FFPE human bladder cancer tissue using Nuclear Protein 1 Polyclonal Antibody at 5 ug/ml. NUPR1 is visualized in red using a Cy3-conjugated secondary antibody, while nuclei are counterstained blue with DAPI. Prominent red fluorescence is observed in numerous tumor cells, including nuclear and perinuclear regions. Heat-mediated antigen retrieval was performed using EDTA buffer (pH 8.0).



NUPR1 Antibody IHC Staining in Human Bladder Cancer Tissue. Immunohistochemical analysis of FFPE human bladder cancer tissue using Nuclear Protein 1 Polyclonal Antibody at 2 ug/ml. Brown DAB staining is observed predominantly in tumor cell nuclei, with additional staining in some cytoplasmic regions. Hematoxylin was used for nuclear counterstaining. Heat-mediated antigen retrieval was performed using EDTA buffer (pH 8.0).



NUPR1 Antibody Immunocytochemistry in Human U2OS Cells. Dual-color immunofluorescence staining of human U2OS cells using Nuclear Protein 1 Polyclonal Antibody at 5 ug/ml. NUPR1 is visualized in green using a DyLight 488-conjugated secondary antibody, while beta-tubulin is shown in red using a Cy3-conjugated secondary antibody. Green fluorescence is concentrated in nuclear regions, contrasting with the extensive cytoplasmic microtubule staining. Enzymatic antigen retrieval was performed for 15 minutes.



NUPR1 Antibody Flow Cytometry Analysis in Human HepG2 Cells. Intracellular flow cytometry analysis of fixed and permeabilized HepG2 cells using Nuclear Protein 1 Polyclonal Antibody at 1 ug per million cells. The NUPR1-stained population is represented by the blue histogram, the rabbit IgG isotype control by green, and the unstained control by red. The NUPR1-stained population shows a rightward fluorescence shift relative to both controls. Detection was performed using a DyLight 488-conjugated secondary antibody.

Description

NUPR1 Antibody / Nuclear Protein 1 Polyclonal Antibody targets nuclear protein 1 (NUPR1), also known as p8 and candidate of metastasis 1 (COM1). NUPR1 is a small, highly basic, intrinsically disordered protein that functions as a stress-responsive transcriptional regulator. Originally identified in pancreatic cells during acute pancreatitis, NUPR1 is rapidly induced by cellular disturbances including oxidative stress, nutrient deprivation, hypoxia, and endoplasmic reticulum stress. Its ability to coordinate adaptive gene expression makes it an important component of cellular survival mechanisms.

NUPR1 associates with chromatin and interacts with transcriptional regulators to influence gene expression without functioning as a conventional sequence-specific transcription factor. Its intrinsically disordered structure permits flexible interactions with multiple protein partners involved in chromatin remodeling and transcriptional control. Through these interactions, NUPR1 participates in cell cycle regulation, DNA damage responses, autophagy, and apoptosis. Its activity is particularly important when cells encounter environmental or metabolic conditions that threaten normal homeostasis.

In cancer biology, NUPR1 has emerged as a regulator of tumor cell adaptation and therapeutic resistance. Elevated expression has been documented in several malignancies, including pancreatic, breast, lung, and liver cancers. Experimental studies have demonstrated that NUPR1 can promote pancreatic tumor development by protecting cells from stress-induced apoptosis through signaling involving RELB and IER3. Its influence on cellular metabolism and antioxidant defenses also contributes to survival under conditions of oxidative stress. NUPR1 additionally participates in the regulation of ferroptosis, an iron-dependent form of cell death associated with lipid peroxidation.

Although frequently associated with tumor-promoting activities, NUPR1 functions are context-dependent and reflect its broader role in coordinating cellular responses to stress. Its expression and activity can influence whether damaged cells recover, undergo growth arrest, or initiate programmed cell death. Research involving NUPR1 Antibody contributes to understanding the molecular connections between transcriptional adaptation, metabolic stress, and cancer cell survival.

Explore additional antibodies involved in cellular stress responses, transcriptional regulation, apoptosis, and other fundamental processes in our Cell Biology Antibodies collection.

Application Notes

Optimal dilution of the NUPR1 Antibody / Nuclear Protein 1 Polyclonal Antibody should be determined by the researcher.

Immunogen

A synthetic peptide corresponding to a sequence at the C-terminus of human NUPR1 was used as the immunogen for the NUPR1 antibody.

Storage

After reconstitution, the NUPR1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

NUPR1 antibody, Nuclear protein 1 antibody, p8 antibody, COM1 antibody, COM-1 antibody, Candidate of metastasis 1 antibody, Stress-activated protein p8 antibody, Nuclear protein p8 antibody, NUPR1 protein antibody, Chromatin-associated protein p8 antibody

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